

in Ukraine. «Journal of Geology, Geography and Geoecology». Oles Honchar Dnipro National University. – D. – Volume 28 №4. – 2019. – pp.631–639.

4. De Bliy G. Geography: worlds, regions, concepts / G. De Bliy, P. Muller, O. Shabliy. – K. : Lybid, 2004. – 740 p.

5. Derevyanko S. Socio-economic situation of disabled people in Ukraine and the problems of their social protection in a transformational economy / S. Derevyanko // Ukraine: aspects of labor. – 2005. – № 4. – pp. 12–16.

6. Zhuk M.V. Export potential of the region: theory, methodology, practice / MV Zhuk. – Chernivtsi: Ruta, 2002. – 199 p.

Дані про автора

Белоусова Наталія Володимирівна,

доцент кафедри аерокосмічної геодезії та землеустрою, Національний авіаційний університет, м. Київ
e-mail: belousova-69@ukr.net

Данные об авторе

Белоусова Наталья Владимировна,

доцент кафедры аэрокосмической геодезии и землеустройства, Национальный авиационный университет, г. Киев

e-mail: belousova-69@ukr.net

Data about the author

Natalia Bielousova,

Associate Professor of the Department of Aerospace Geodesy and Land Management, National Aviation University, Kyiv

e-mail: belousova-69@ukr.net

UDC 658:331

KOTSERUBA N.V.

Analysis of labor resources of the enterprise

The subject of research – the methodology of analysis of labor resources and the effectiveness of their use in the enterprise management system.

The purpose of the study is to study the theoretical foundations and study the practical aspects of the analysis of human resources.

Methodology of work – scientific methods based on the dialectical method of cognition and objective laws of economics, methods of induction and deduction, etc. were used.

Results of work – the concept of labor resources and personnel as economic categories is outlined, the interrelation of productivity and labor intensity of work and dependence on their level of final financial result of the enterprise is defined.

Conclusions: effective functioning of the enterprise management system is possible only with a high level of human resources. An important condition for the formation of an effective team is the constant development of staff, in particular training, the level of which should precede the development of production technology and system of organization of the production process.

Key words: labor resources, personnel, labor characteristics, personnel, qualification, labor potential.

КОЦЕРУБА Н.В.

Аналіз трудових ресурсів підприємства

Предмет дослідження – методологія аналізу трудових ресурсів та ефективності їх використання в системі управління підприємством.

Мета дослідження – вивчення теоретичних засад та дослідження практичних аспектів аналізу трудових ресурсів.

Методологія проведення роботи – використовувалися наукові методи, засновані на діалектичному методі пізнання та об'єктивних законах економіки, методи індукції та дедукції, тощо.

Результати роботи – окреслено поняття трудових ресурсів та персоналу як економічних категорій, визначено взаємозв'язок продуктивності та трудомісткості праці та залежності від їх рівня кінцевого фінансового результату підприємства.

Висновки: ефективне функціонування системи управління підприємством можливе лише за умови високого рівня кадрового потенціалу. Аналіз трудових ресурсів підприємства є невід'ємною частиною загального аналізу діяльності та центральною ланкою при вирішенні питань конкуренції, економічного зростання і забезпечення ефективної роботи суб'єктів господарювання. Важливою умовою формування ефективної команди є постійний розвиток персоналу, зокрема підвищення кваліфікації, рівень якої повинен випереджати розвиток технології виробництва і системи організації виробничого процесу.

Ключові слова: трудові ресурси, персонал, характеристики праці, кадри, кваліфікація, трудовий потенціал.

КОЦЕРУБА Н.В.

Анализ трудовых ресурсов предприятия

Предмет исследования – методология анализа трудовых ресурсов и эффективности их использования в системе управления предприятием.

Цель исследования – изучение теоретических основ и исследования практических аспектов анализа трудовых ресурсов.

Методология проведения работы – использовались научные методы, основанные на диалектическом методе познания и объективных законах экономики, методы индукции и дедукции и др.

Результаты работы – обозначены понятия трудовых ресурсов и персонала как экономических категорий, определена взаимосвязь производительности и трудоемкости труда и зависимости от их уровня конечного финансового результата предприятия.

Выводы: эффективное функционирование системы управления предприятием возможно только при условии высокого уровня кадрового потенциала. Анализ трудовых ресурсов предприятия является неотъемлемой частью общего анализа деятельности и центральным звеном при решении вопросов конкуренции, экономического роста и обеспечения эффективной работы субъектов хозяйствования. Важным условием формирования эффективной команды является постоянное развитие персонала, в частности повышение квалификации, уровень которой должен опережать развитие технологии производства и системы организации производственного процесса.

Ключевые слова: трудовые ресурсы, персонал, характеристики труда, кадри, квалификация, трудовой потенциал.

Formulation of the problem. In today's market economy, labor relations – one of the most difficult aspects of the enterprise and the team. Sometimes, less time is devoted to addressing technical and technological shortcomings than labor conflicts. The team must constantly take into account the individual interests, psychological aspects and characteristics of each individual employee. That is why the formation of a friendly workforce is a priority for the leader in order to obtain high productivity and a healthy microclimate in the team.

To achieve these goals it is necessary to solve a number of tasks: to explore the economic essence of labor resources, personnel of the enterprise, the methodology of forming information about the effectiveness of their use; to carry out the economic and legal analysis of the special literature on a research subject; to characterize methods of estimation of use of labor resources of the enterprise, to

estimate qualitative characteristics of work; identify factors that affect the main indicator of the efficiency of labor resources – labor productivity; consider the methodology of analysis of labor resources of the enterprise and the effectiveness of their use.

Analysis of recent research and publications: the development of the theory and methodology of definition, analysis and audit of labor resources and the effectiveness of their use have been thoroughly studied by domestic scientists FF Butynets, LS Shevchenko, LV Mishkovets, OA Grishnova, AV Linenko, NV Kalenina, IO Chayun, GM Bogoslavets, NS Dovgal, LL Stasiuk, I. Yu. Bondar, OO Hetman, V. M. Shapoval, OS Ivanilov, MO Nikonovich, KO Redko, O. Yu. Redko, VV Nemchenko and others.

Unresolved parts of the problem: at present, with the development of science and technology and continuous computerization, there is a need to reconsider the basic principles of labor analysis, the rela-

tionship between productivity and labor intensity and dependence on their level of final financial results.

The purpose of writing the article is to improve the methodology of analysis of labor resources of the enterprise and the growth on this basis of labor productivity and improve the financial results of the business entity.

Presentation of the main research material: In economics, there are concepts of «labor resources» and «enterprise personnel». Labor resources should be understood as a part of the working age population that has the necessary physical capabilities, knowledge and practical experience to carry out certain work in order to receive monetary remuneration.

The labor resources include both actually employed and potential employees [2, p. 120].

The concept of «labor resources» is usually used to highlight their specificity as a special type of resources used among the whole set of resources used by the enterprise. To characterize the labor potential of the enterprise also use the expression «labor resources» of the enterprise.

Labor resources of the enterprise – industrial and production personnel of the enterprise, which has a certain education and qualifications, an important component of which are workers [1].

Labor resources are characterized by a set of mental and physical abilities necessary for the production of material goods. In general, the ability to work can be characterized by the number of able-bodied employees in the enterprise, the level of their training and qualifications, labor efficiency of staff and many other economic indicators.

Personnel means a permanent (full-time), usually qualified staff of the enterprise. All personnel of permanent and temporary employees who work under a contract of employment at the enterprise, called the staff of the enterprise [12, p. 150].

The personnel of the enterprise is the central link in the decision of questions of a competition, economic growth and maintenance of effective work of subjects of managing.

Personnel formation in market conditions is based on the following basic principles:

- freedom of choice by the employee of the specialty and place of work;
- voluntary work and labor relations;
- state regulation of labor relations, working conditions and social protection of employees, which is

provided by laws and regulations on employment and dismissal, protection of the dismissed and unemployed, their retraining, working hours, labor protection, social guarantees for women, minors and the disabled, state and social insurance [5, p. 311].

The main features of the staff:

- the existence of employment relationships with the employer, which are formalized by an employment agreement (contract);
- possession of certain qualitative characteristics (profession, specialty, qualification, competence, etc.);
- target orientation of personnel, in ensuring the achievement of the goals of the organization by establishing adequate goals for an individual employee and creating conditions for their effective implementation.

Today, research economists are making great efforts to finally clarify the essence of the concept of «labor resources» in the functioning and development of a market economy. However, despite thorough research on this issue, scientists have not yet been able to develop a clear, unified position in the interpretation of this concept, and some members of the scientific community generally deny the expediency of assigning labor status to economic category, appealing to the concept of statistical rather than economic by its nature. In scientific thought, there are a large number of interpretations of the essence of the term «labor resources» (Table 1).

As we can see, in the economic literature, most researchers agree and consider the labor force as part of the population of the country, which by its physical development, mental abilities and knowledge is able to work in the economy.

Linenko A. considers the structure of labor potential of the enterprise according to the following criteria:

1. by the level of aggregation of estimates (labor potential of the employee, group labor potential, labor potential of the enterprise);
2. on the range of opportunities (individual labor potential, collective labor potential);
3. by the nature of participation in the production and economic process (technological potential, management potential);
4. by place in the socio-economic system of the enterprise (structural and formative labor potential, entrepreneurial labor potential, productive labor potential).

Some economists also link labor potential to categories such as:

Table 1. Interpretation of the concept of «labor resources» by different authors

Author	Contents
Grinyova V.	under labor potential means the maximum value of possible participation of workers in production, taking into account other psychological features, the level of professional knowledge and experience [3, p.61].
Kalenina N.	proposes to define the labor potential of the enterprise as the available and potential opportunities of its employees to ensure the realization of the goals of the enterprise with the most rational costs of all production resources under the influence of favorable socio-demographic, environmental and economic factors [6, p.113].
Buryak P.	He believes that «labor resources» are able-bodied part of the population that has physical development, mental abilities, knowledge that are necessary for work [9, p.40].
Lukashevich V.	The main productive force of society, the carriers (subjects) of relations formed in the process of formation, distribution and use of labor resources. As an economic category – the population that has the physical and intellectual ability in accordance with the conditions of reproduction of labor; as planned and accounting – the population of working age, employed and unemployed in social production [7, p.15]
	Labor resources of the enterprise – industrial and production staff of the enterprise, which has a certain education and qualifications, an important component of which are workers [1].
Anpilogova Zh.	Labor resources are the economically active, able-bodied population, the part of the population that has the physical and spiritual ability to participate in labor [12].

- workforce;
- intellectual labor potential;
- human capital;
- labor capital, market labor potential;
- human potential;
- human resources;
- and other.

Personnel management is a systematically organized purposeful activity of the enterprise management staff, which is designed to form a team, direct and coordinate personnel activities in such a way as to achieve the desired results on the basis of orderly coordinated effective work taking into account the capabilities and interests of its participants.

Thus, the purpose of personnel management is to meet the needs of the enterprise in it and its most efficient use.

To successfully achieve this goal, staff should be considered on various grounds (Fig. 1) [5, p. 313].

All employees of the enterprise are divided into two groups: industrial and production personnel engaged in production and maintenance; non-industrial personnel employed mainly in the social sphere of the enterprise.

According to the nature of the functions performed, industrial production personnel are divided into six categories: workers; managers; specialists; employees; junior service personnel; trainees (students).

Workers are workers directly engaged in the production of products (services), repair, movement of goods, supervision of industrial units, ad-

justment and maintenance of equipment. Depending on the nature of participation in the production process, workers, in turn, are divided into basic (producing products) and auxiliary (serving the technological process). Duty and repair personnel are allocated separately. Managers – persons with high professional training, directly engaged in the management of production processes and subordinates. They hold senior positions in enterprises and within functional services [2, p. 120].

Specialists – engineers and technicians who perform ordinary management functions, provide technical, organizational, economic management of production processes, as well as organize the activities of industrial and production personnel. This category includes engineers, economists, accountants, sociologists, legal advisers, raters, technologists and more.

Employees – employees who prepare and execute documents, perform administrative and economic, financial, statistical, accounting and other service functions. This category includes clerks, secretaries, printers, clerks, draftsmen, copyists, archivists, agents and more.

The category of junior service personnel includes persons engaged in the maintenance of the main fleet of equipment and machinery, as well as those engaged in the maintenance of the main, auxiliary, duty and repair production workers. The category of interns (students) usually includes people who acquire practical skills to master the profession at a particular company [2, p.121].

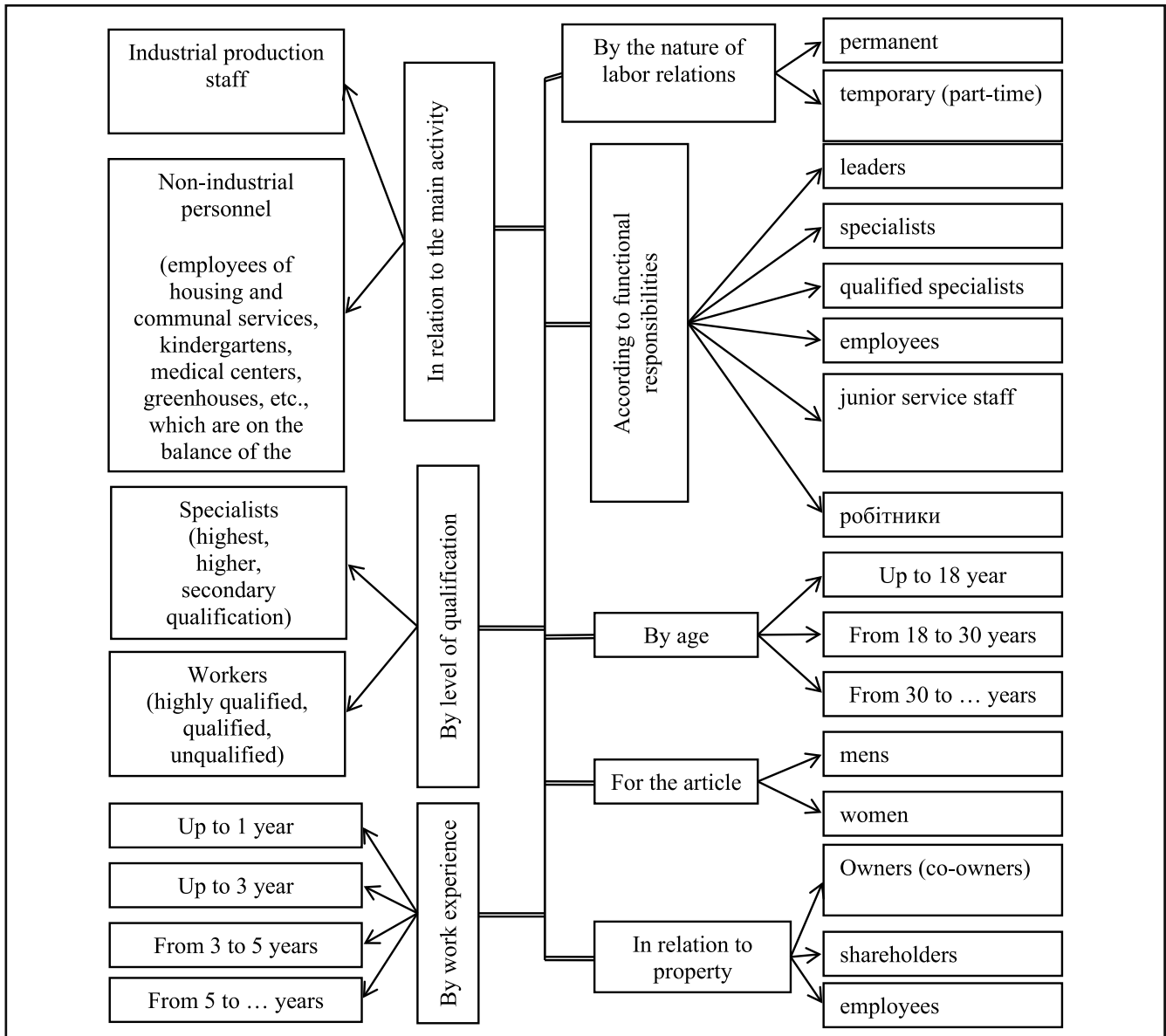


Figure 1 – Classification of the personnel of the enterprise [5, p. 313].

Effective use of staff is an important and priority area of activity of business owners, due to the presence of significant costs for staff maintenance and the desire to maximize their efficiency and effectiveness.

There are the following key indicators for diagnosing the state and efficiency of labor resources of the enterprise: staff, average number of employees, wages, productivity, the share of laid off workers, the number of violations of labor discipline by employees, the level of employment, the ratio of management staff to personnel involved in production activities, labor intensity, the proportion of highly qualified employees, the average age of the employee at the enterprise, the share of employees hired at the enterprise, etc. [8, p. 108].

The efficiency of the use of labor resources of the enterprise characterizes labor productivity, which is determined by the number of products produced per unit of working time, or labor costs per unit of output. At the enterprise level, the main indicators of labor productivity are indicators of production (labor output / labor costs) and labor intensity of products (labor costs / labor output) [10, p. 315].

Production – the number of products produced per unit of working time. Calculated by the formula:

$$B = \frac{OP}{H}, \text{ або } B = \frac{OP}{PE} \quad (1)$$

where B is the output; OP – the volume of output; H – the cost of working time for production; PE – the average number of employees involved in production.

EFFECTS	
Decreased productivity	Increasing labor productivity
- Loss of market position	- Increasing competitiveness in the market
- Reducing the efficiency of resource use	- Improving the efficiency of resource use
- Reducing the level of capacity utilization	- Increasing the level of capacity utilization
- Loss of production and sales	- Increasing production and sales
- Increasing the cost of production	- Reducing the cost of production
- Decrease in profitability of economic activity, labor resources	- Increasing the profitability of economic activity, labor resources

Figure 2. The impact of productivity on the efficiency of economic and financial activities of the enterprise [11, p. 222]

The labor intensity indicator characterizes the cost of working time for the production of a unit of production in kind throughout the range of products produced by the enterprise.

Labor intensity – the cost of working time for the production of a unit of output. Calculated by the formula:

$$T = \frac{H}{OP} \quad (2)$$

where T is labor intensity; H – the cost of working time for production; OP – the volume of output.

The labor intensity indicator has some advantages over the production indicators, because:

- allows you to compare (compare) labor costs for the same products in different departments;
- reflects the direct relationship between production and labor costs;
- allows you to link the measurement of productivity with the reserves of its growth [4].

Factors for increasing labor productivity are the principles, the reasons that make it possible to increase labor productivity. Among them are external (state of scientific and technological progress, level of education and skills of workers, changes in prices and inflation, competition) and internal (technological, organizational conditions, level of cooperation and specialization, economic, progressive production standards, forms of optimization), on which depends the end result of the team.

Unused by the enterprise real opportunities to save labor resources are its reserves for productivity growth. These reserves are due to the improvement and more efficient use of equipment and personnel, reducing the loss of working time, saving raw materials, capital and other resources.

These include:

- reduction of labor intensity of production, due to improvement of equipment and technology;

- improving the use of working time, reducing staff turnover, modern forms of labor organization, improving working conditions, reducing production shortages;

- improving the staff, improving the competence of staff and better use (automation, relative savings, introduction of information technology, reducing the share of managers, improving the psychological climate, creating an atmosphere of creativity in the team) [5, p. 317].

In fig. 2 shows the impact of labor productivity on the efficiency of economic and financial activities of the enterprise [11, p. 222].

Conclusions

Therefore, the effective functioning of the enterprise management system is possible only with a high level of human resources. The effective functioning of the enterprise, the possibility of its expansion and prosperity depend on the analysis of labor resources. Also a very important condition for the formation of an effective team is the constant development of staff, in particular training. The level of personnel qualification must precede the development of production technology and the system of organization of the production and labor process. The higher the general level of economic development, the more complex tasks it has to solve, the more important is the need for highly qualified labor resources.

References

1. Anpilogova JD The concept of labor resources and ways to increase the efficiency of their use. Problems of improving the efficiency of infrastructure. Kyiv: NAU.2016. Vip. 31.C.48–52.
2. Hetman OO Economics of the enterprise: textbook. way. / OO Getman, VM Shapoval. Kyiv: Center for Educational Literature, 2010. 488 p.

3. Grineva VM Labor economics and socio-labor relations: textbook. way. / V.M. Grinyova, G. Yu. Shulga. Kyiv, 2010. 61 p.

4. Grishnova OA Labor economics and socio-labor relations: textbook. Kyiv: Knowledge, 2011. 390 p.

5. Economics of the enterprise: textbook. / I.O. Cha-yun, G.M. Bogoslavets, N.S. Dovgal, L.L. Stasiuk, I. Yu. Bondar. Kyiv: Kyiv. nat. trade and economy University, 2005. 569 p.

6. Kalenina N.V. The essence of the category «labor potential of enterprises». State and regions. Business Economics. 2008. № 3.C. 111–115.

7. Lukashevich V.M. Labor economics and socio-labor relations: textbook. way. Lviv: New World–2000, 2016. 248 p.

8. Melnyk O.G. Systems of diagnostics of activity of machine-building enterprises: polycriteria concept and tools: monograph. Lviv: Lviv Polytechnic Publishing House, 2010. 344 p.

9. Pokynchereda V.V. Labor resources, labor, human capital: accounting and economic essence of the categories. Economy and state. 2018. № 8. S. 35–41.

10. On approval of standard forms of primary accounting of personnel: Order of the Ministry of Statistics of Ukraine №277 of 27.10.95. URL: <https://zakon.rada.gov.ua/rada/show/v0277202-95> (access date: 28.04.2021).

11. Sidun V.A., Ponomareva Yu. V. Economics of the enterprise: textbook. way. Kyiv: Center for Educational Literature, 2003. 436 p.

12. Financial audit: information and analytical support: monograph / E.V. Mnykh, S.V. Bardash, K.O. Nazarova, O.L. Sherstyuk, V.P. Belyakova, V.P. Minyailo. K.: KHTEY, 2015. 416 c.

References

1. Anpilohova Zh. D. (2016) Poniattia trudovykh resursiv ta napriamy pidvyshchennia efektyvnosti yikh vykorystannia. [The concept of labor resources and ways to increase the efficiency of their use] Problemy pidvyshchennia efektyvnosti infrastruktury. vol.31. pp.48–52.

2. Hetman O. O., Shapoval V. M. (2010) Ekonomika pidpryemstva. [Economics of the enterprise] Navch. posib. pp.488.

3. Hrynova V. M., Shulha V. M. (2010) Ekonomika pratsi ta sotsialno-trudovi vidnosyny. [Labor economics and socio-labor relations] Navch. posib. pp.61.

4. Hrishnova O. A. (2011) Ekonomika pratsi ta sotsialno-trudovi vidnosyny. [Labor economics and socio-labor relations] Pidruch. pp.390.

5. Chaiun I. O., Bohoslavets H. M., Dovhal N. S., Stasiuk L. L., Bondar I. Yu. Ekonomika pidpryemstva. [Economics of the enterprise] Pidruch. (2005). pp.569.

6. Kalienina N. V. (2008) Sutnist katehorii «trudovyi potentsial pidpryemstv». Derzhava ta rehiony. [The essence of the category «labor potential of enterprises»] Ekonomika pidpryemstva. № 3. pp.111–115.

7. Lukashevych V. M. (2016) Ekonomika pratsi ta sotsialno-trudovi vidnosyny [Labor economics and socio-labor relations] Navch. posib. Lviv: Novyi svit–2000., pp.248.

8. Melnyk O. H. (2010) Systemy diahnostyky diialnos-ti mashynobudivnykh pidpryemstv [Systems of diagnostics of activity of machine-building enterprises] Polikryterialna kontseptsiia ta instrumentarii: monohrafiia. Lviv: Vyd-vo Lvivskoi politekhniki., pp.344.

9. Pokynchereda V. V. (2018) Trudovi resursy, robocha syla, liudskyy kapital: oblikovo-ekonomichna sutnist katehorii [Labor resources, labor, human capital]. Ekonomika ta derzhava.. № 8. pp.35–41.

10. Pro zatverdzhennia typovykh form pervynnoho obliku osobovoho skladu: Nakaz Minstatu Ukrainy №277 vid 27.10.95. URL:<https://zakon.rada.gov.ua/rada/show/v0277202-95> (data zvernennia: 28.04.2021).

11. Cidun V.A. (2003) Ponomarova Yu. V. Ekonomika pidpryemstva [Economics of the enterprise] Navch. posib. Kyiv: Tsentr navchalnoi literatury., pp.436.

12. Mnykh Ye. V., Bardash S. V., Nazarova K. O., Sherstiuk O. L., Beliakova V. P. (2015) Finansovy audyt: informatsiino-analitychne zabezpechennia [Financial audit: information and analytical support] monohrafiia, pp.416.

Data about the author

Natalya Kotseruba,

Candidate of Science (Economics), Associate Professor, Department of Accounting and Taxation Vinnytsia Trade and Economic Institute of KNTEU

e-mail: nata@3198630@gmail.com

Дані про автора

Коцєруба Наталія Василівна,

к.е.н., доцент кафедри обліку та оподаткування, Вінницький торговельно-економічний інститут КНТЕУ

e-mail: nata@3198630@gmail.com

Данные об авторе

Коцєруба Наталья Васильевна,

к.э.н., доцент кафедры учета и налогообложения, Винницкий торгово-экономический институт КНТЭУ

e-mail: nata@3198630@gmail.com